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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,299	03/14/2001	Qi Xu	901033-1005	3133
22145	7590	08/02/2004	EXAMINER	
KLEIN, O'NEILL & SINGH 2 PARK PLAZA SUITE 510 IRVINE, CA 92614			SINGH, SUNIL	
		ART UNIT		PAPER NUMBER
				3673

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/808,299	XU ET AL	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sunil Singh	3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
**THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 45-47 and 49-58 is/are pending in the application.
- 4a) Of the above claim(s) 49-56 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 45-47 and 57 is/are rejected.
- 7) Claim(s) 58 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

**DETAILED ACTION**

In applicant's response dated 5/17/04 to examiner's restriction requirement mailed 4/21/04, applicant elected **without traverse** Species I drawn to Figs. 4-23 readable on claims 45-47 and 57-58. However, applicant indicated that claim 45 is generic. The examiner disagrees since neither independent claims 49 and 50 require a vertical vortex-shedding surface discontinuity oriented substantially parallel to the axis of the structure as is required by claim 45. Therefore, applicant needs to cancel claims 49-56 as being directed to non-elected Species.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 45-47 and 57 are rejected under 35 U.S.C. 102(b) as being anticipated by French document (FR 2367148).

See Figures and abstract.

3. Claims 45-47 and 57 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Application document (0188358).

Upon further consideration of the '358 document, the examiner's position is that the structure shown in Figure 6 would inherently affect VIV forces acting on the marine

structure. The reason for such assertion is taught by Allen et al. (US 6702026) wherein the particular smoothness of a cylindrical structure affects VIV forces; therefore, the notch/projection shown in Figure 6 would inherently affect VIV forces acting on the marine structure.

See Figures and abstract.

***Allowable Subject Matter***

4. Claim 58 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in **independent form including all of the limitations of the base claim and any intervening claims.**

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunil Singh whose telephone number is (703) 308-4024. The examiner can normally be reached on Monday through Friday 8:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on (703) 308-2978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3673

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sunil Singh



Patent Examiner  
Art Unit 3673

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7/23/2004